FAA Airspace Review and Approval Process

Airports Annual Conference

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Federal Aviation Administration

Steven Wong, HNL-623
Honolulu Airports District Office
Project Manager

Airports Division's Role is to:

- Receive and process FAA Form 7460-1, *Notice of Proposed Construction or Alteration* and FAA Form 7480-1, *Notice of Landing Area Proposal.*
- Airports Division administers the on-airport evaluations and coordinates with Flight Procedures, Airway Facilities, Air Traffic and Flight Standards Divisions (military as needed).
- Receive and process Airport Layout Plans.
- Comment on Obstruction Evaluations (processed by ATO)

What Data is Required on FAA Forms 7460-1 & 7480-1?

- Completed form with Original Signature
- ACCURATE Coordinates (Latitude, Longitude and Elevation)
- ALP to SCALE with structure/object identified (7460-1)
- Maps, sketches and topographical maps to SCALE (7480-1)
- Each Form should have ONE proposed project

FAA Form 7460-1

- FAA Contact – Airport Program Manager
- Run Part 77 Calculations to determine penetrations of protected surfaces (primary, transitional, approach and horizontal surface, etc.).
- Evaluate structure/object based on FAA Advisory Circular, 150/5300-13 *Airport Design.* Determine impacts to design standards such as the Object Free Area, Obstacle Free Zone, and Runway Safety Area.

Airport Layout Plans

Airport Layout Plan (ALP) review includes:

- ALP Checklist items
- Compliance with FAA Advisory Circular, 150/5300-13 *Airport Design* standards
- Identify type of environmental review required on proposed projects
- Consistency between Exhibit A, Property Map and the ALP

Obstruction Evaluations – Off Airport

Airports Division Review includes the following:

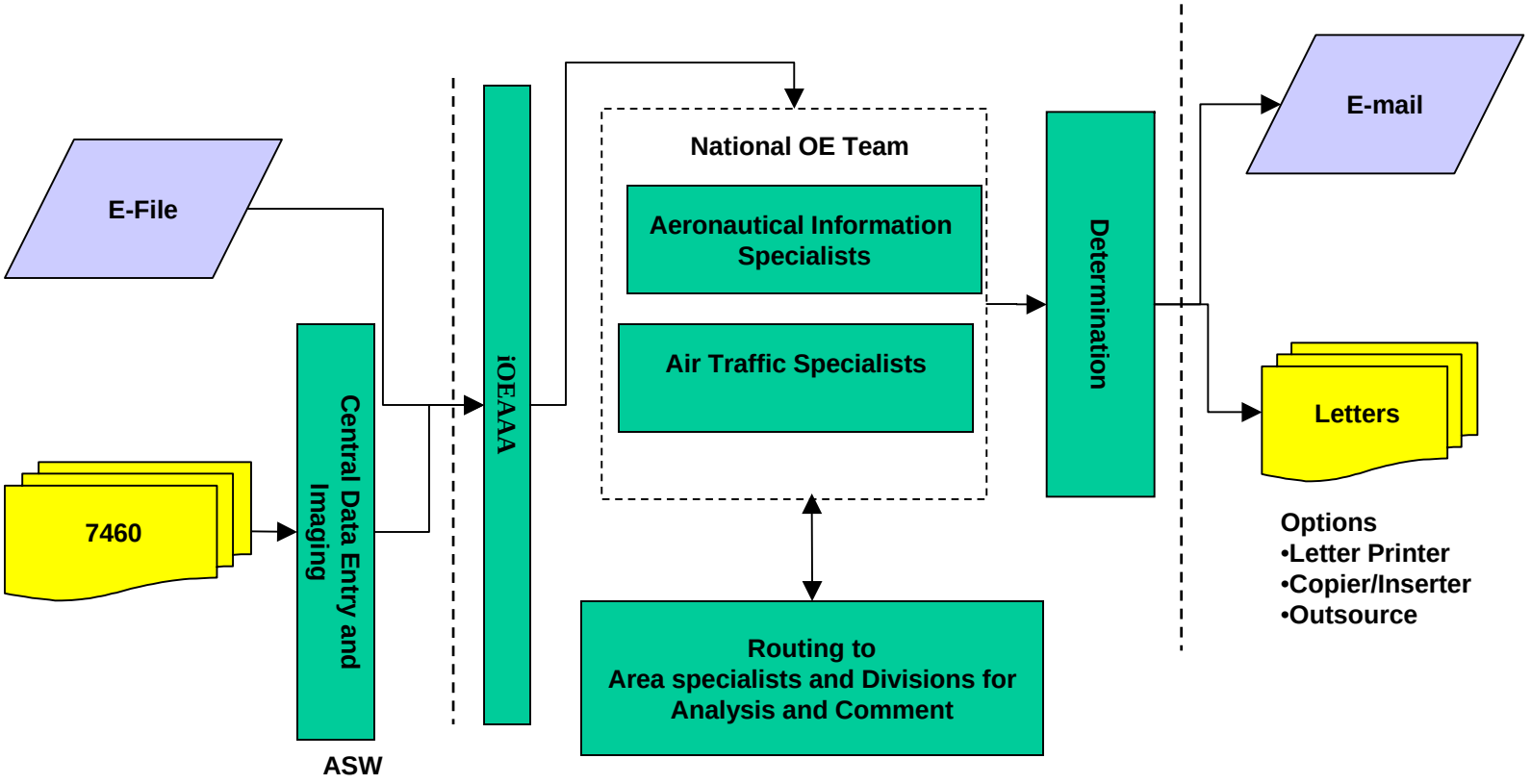
- Land use compatibility (i.e. noise impacts)
- Airport Design standards impacts such as the Runway Safety Area
- Safety
- Consistency with future projects shown on the ALP

Karen McDonald, AT Airspace Branch 520
Los Angeles Obstruction Evaluation Specialist

- Evaluates the effect a proposed structure (off airport) would have on the National Airspace System (NAS) and Air Traffic Control Procedures.
- Authority to conduct aeronautical studies under 14 CFR Part 77.
- Coordinates and consolidates all FAA Division and Military comments.
- Issues final Determination of Hazard or Determination of No Hazard.
- FAA cannot stop construction projects.
- Important for Airport Authority to work closely with State and Local zoning boards to protect airspace.
- Air Traffic Organization is responsible for e-file initiatives.
- Visit http://oeaaa.faa.gov for more information

Karen McDonald
Los Angeles Obstruction Evaluation Specialist

- **Obstruction Evaluation Flow Chart**



John Urquhart, LAX FPO
Los Angeles Flight Procedures Office

LAX-FPO's Role is to:

- Identify when obstructions exceed Terminal Instrument Procedures (TERPS) imaginary surfaces.
- Identify the effect of these obstructions to terminal and en route Instrument Flight Rule (IFR) operations.
- Determine the effect of these obstructions and coordinate with other FAA Divisions.

David Butterfield
Flight Standards Division
All Weather Operations Program Manager

- AFS Responsibilities for US Airports
  - Category II and III Certification
  - Surface Movement Guidance Control System (SMGCS)
  - Special Instrument Procedures
  - Airport Airspace Analysis & Obstacle Evaluation
  - Air Carrier Environmental Review

Category II & III Certification

- Airport & Operator approval at Regional Flight Standards Level
- Flight Standards coordinates with all FAA Lines of Business.
- If you build it, they will come.
  - Regional & reliever airports typically request CAT II/III landing minimums to an existing CAT I runway.
  - Large hub airports tend to build new runways.

Category II & III Weather Minima

- Category II — Below 1800 RVR down to 1200 RVR
- Category III A — Below 1200 RVR down to 700 RVR
- Category III B — Below 700 RVR down to 150 RVR
- U.S. Operators are commonly authorized RVR 1000, RVR 700, RVR 600 and RVR 300 depending on aircraft equipment and aircrew training.

Surface Movement Guidance Control System (SMGCS)

- Recommended for Ground Operations with Visibility < 1200 RVR
- Now required for approval of any New CAT III Runway
- Begins with establishment of a SMGCS Working Group (Proponent, FAA, and Users)
- SMGCS Plan approval
- SMGCS Operation approval
- Controlling Document: AC 120-57A

SMGCS Requirements

- 1200 feet RVR down to 600 feet RVR
  - Runway Leadoff Lights
  - Taxiway Edge Lights or Centerline Lights
  - Runway Guard Lights (uncontrolled)

- Below 600 feet RVR
  - Runway Leadoff Lights
  - Taxiway Centerline Lights
  - Runway Stop Bars (controlled)
  - Taxiway Signage

- A follow-me vehicle is a mitigation for missing lighting.

- All plans require vehicle movement routes.

Special Instrument Procedures

- A Procedure developed using Non-Standard Criteria
- Rapid migration from Ground-Based to Space-Based Systems
- Electronic advances allow tighter obstacle clearance routes.
- “Specials” are issued to appropriately equipped operators.
- Flight Standards provides oversight and central coordination.
- “Specials” provide economic benefit and improved emergency services for the community.

Airport Airspace Analysis

- Review Proposals to determine the Safety of Aeronautical Operations, and of Persons and Property on the ground.

- Example Airspace Studies
  - NRAs (Non-rule Airport Aeronautical Study)
    - Airport Layout Plans
    - Airport Construction
    - Heliports
    - Air Traffic Control Tower Locations
    - Parachute Drop Zones

Airport Airspace Analysis

- Modification to Airport Standards
  - Taxiway to Runway Separation
  - Markings (SMGCS)
  - Critical Areas (Precision Obstacle Free Zone)
  - End-around Taxiways
  - A-380 Operations

  The Airports Office is responsible for formulating and issuing the official determination.

Obstacle Evaluations

- Off-Airport Construction
- Obstacles evaluated for Affect on the Safety of Aircraft operating under Visual Conditions
- Examples
  - KFI Antenna at La Mirada, CA (Fullerton Airport)
  - Phoenix Cardinal Stadium (Sky Harbor Int'l)
  - Las Vegas Development (McCarran Int'l)
  - AOSC (http:www.aosc.faa.gov)

  Air Traffic is responsible for formulating and issue the official determination.

Air Carrier Environmental Review

- Air Carriers requesting approval to initiate new scheduled service are required to conduct a NEPA compliance process.
- Air Carriers need Airport assistance with the environmental review checklist.
- The FAA requests your support.

Vincent Q. Nguyen
Western Service Area
Engineering Services
Acting Operations Engineering Manager (AWP-471)

- Technical Operations responsibilities in airspace studies include
  - Evaluate electromagnetic and physical effects on air navigation facilities (existing and future)
  - Evaluate effects on ATCT Services
    - Line of sight blockage, sunlight reflections, structure/apron lighting
    - Visibility of new movement areas
  - Evaluate Radio Frequency Interference

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Western Service Area
Engineering Services
Acting Operations Engineering Manager (AWP-471)

- Electromagnetic effects include
  - Reflections of signals from metal objects
    - Navigation signal errors (ILS, VOR)
    - Radar – False targets, beam splitting
    - Communications – Line of Sight blockage
  - Physical Effects
    - ATCT line of sight, sunlight reflections
    - PAPI/VASI obstacle clearance surfaces
    - Effects on Wind instruments (ASOS/AWOS)
    - FAA Infrastructure – buried cables, on airport facilities

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Engineering Services
Acting Operations Engineering Manager (AWP-471)

- How can you help expedite reviews?
  - ATCT line of sight analysis – mark up ALP copy
    - Distances from ATCT to structure, structure to nearest movement area; elevation of movement surface
  - All reviews – mark up copy of ALP with work location
  - Accurate coordinates, elevations
  - If airport has ILS, VOR, or Radar – provide building elevations with outside materials shown
  - Construction projects – phase work considering ILS, VOR critical areas, show haul roads, grading near glide slopes

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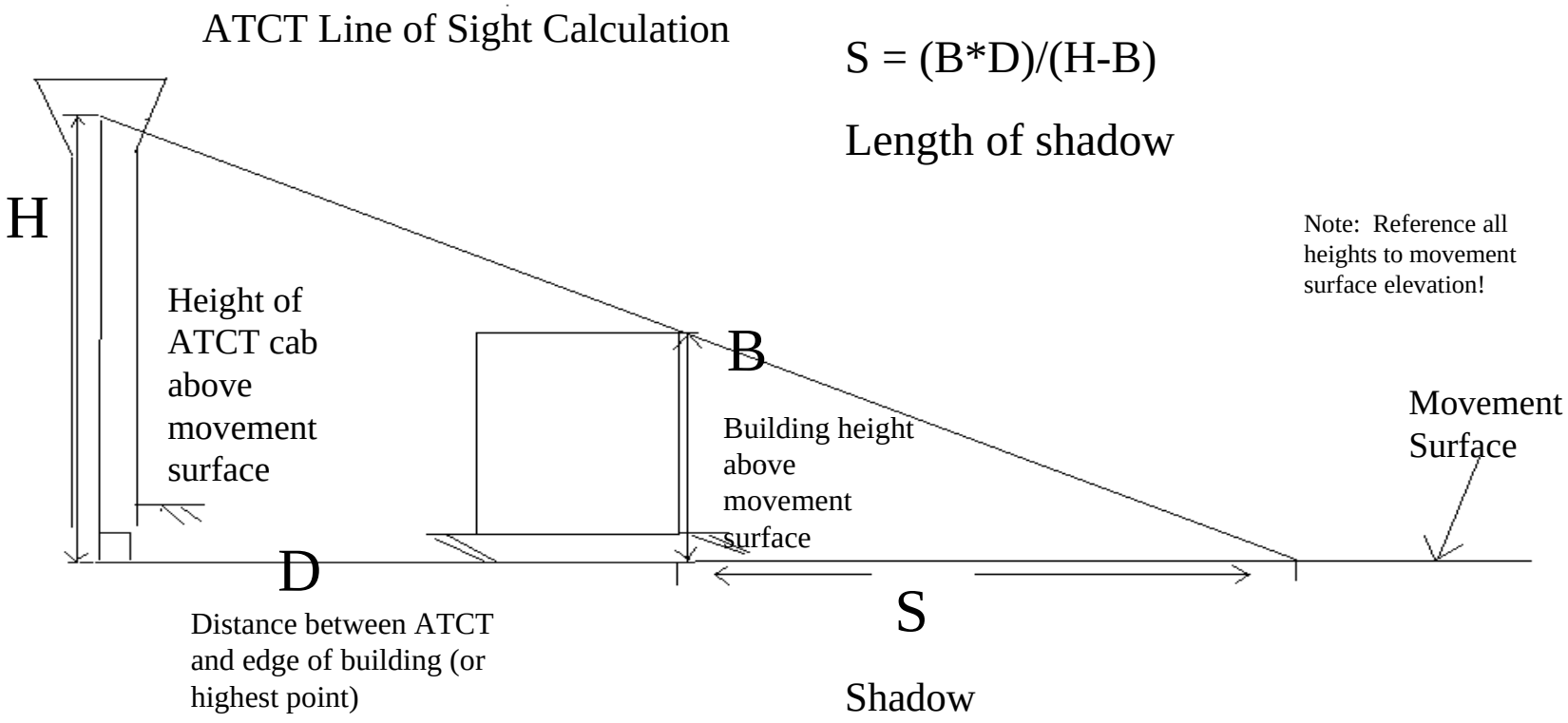
Acting Operations Engineering Manager (AWP-471)



QUESTIONS